

ABSTRACT

5 The present invention relates to the use of proteins which are differentially expressed in
primary brain tumor tissues, as compared to normal brain tissues, as biomolecular targets for
brain tumor treatment therapies. Specifically, the present invention relates to the use of
immunotherapeutic and immunoimaging agents which specifically bind to one or more of human
proteins angiopoietin related protein 2 (ARP-2,) secreted protein acidic, rich in cysteine
10 (SPARC,) c-met proto-oncogene (C-MET,) brevican (BEHAB,) CD-44 antigen (CD-44,) tetraspanin 3 (TSPN3,) pleiotrophin (PTN,) osteopontin (OPN,) vasoactive intestinal peptide
receptor-2 (VIPR-2,) and receptor protein tyrosine phosphatase zeta (PTP ζ) for the treatment and
visualization of brain tumors in patients. The present invention also provides compounds and
pharmaceutically acceptable compositions for administration in the methods of the invention.
15 The present invention also provides novel splice variants of protein PTP ζ , PTP ζ SM1 and PTP ζ
SM2. Nucleic acid probes specific for the spliced mRNA encoding these variants and affinity
reagents specific for the novel proteins are also provided.